AT Community SAIN FY05 Project Report – Status of Deliverables

John Peine and Tom Burley 8/25/06

Current membership and interest in the Appalachian Trail (AT) Community is the most robust and active that it has ever been. The Community is serving as the web-based facilitating agent for the Appalachian Trail Environmental Monitoring Program and for the planned Symposium. Enthusiasm for usage of the NBII Portal AT Community has been very high with the AT Environmental Monitoring Program initiative. Current membership of the Community is at over 260 members consisting of scientists, researchers, land managers, among numerous federal, state, NGO, and university entities. The end of this report contains a table showing current membership among various institutions. Below are summary bullets showing the various accomplishments and FY05 deliverables met:

The NBII Portal AT Community and the Appalachian Trail Environmental Monitoring Symposium – FY05 update of project deliverables and additional highlights:

- The Appalachian Regional data viewer has completed data assemblage of 73 data themes compiled from sources including the U.S. Fish and Wildlife Service, the National Atlas, the U.S. Census, the USGS, the Appalachian Trail Conservancy, the Bureau of Transportation Statistics, EPA, ESRI, NBII, and SAMAB. The purpose of this data is to put the full region of the Appalachian Trail and the state of the environment in a continental scale context.

- The aforementioned data themes will be made available via an online interactive data viewer on the Cooperative Urban Ecosystem Studies (CUES) website of the USGS Eastern Region Geospatial Program Office.

- FGDC-NBII compliant metadata has been created for all 73 data themes and uploaded to the NBII clearinghouse.

- The Appalachian National Scenic Trail Park Office is fully using the AT Community to coordinate development of the AT Environmental Monitoring Program planned for utilizing the Appalachian Trail as a continental 'mega-transect' for integrated science and monitoring.

- The Appalachian Trail Conservancy is using the AT Community for primary communication as well as planning and facilitation of the planned AT Environmental Monitoring Program and Symposium in November.

- Custom navigation documents for the AT Community for meeting the needs of users were developed and revised over time. Account creation documents were also created to streamline the process.

- John Peine is a full contributor for the AT Environmental Monitoring Program/Symposium Organizing Team along with representatives from NPS, the AT Park office, and ATC. He is also the staff support contact for the Air Quality and Climate Working Group.

- Thomas Burley, the assistant AT Community manager, is a member of the Data Management Working Group for the AT Environmental Monitoring Program along with Marcia McNiff of the Northeast Information Node. They have conducted two conference call planning meetings as of 8-25-06

- The Appalachian National Scenic Trail Park Office and the Appalachian Trail Conservancy, with John Peine as a Co-PI, is submitting a grant application to EPA to help facilitate the planned Environmental Monitoring Symposium to be held at the U.S. Fish and Wildlife Service National Conservation Training Center. The purpose of the

symposium is to define the parameters to be included and monitoring protocols for the core Trail I&M science initiative.

- The AT Environmental Monitoring Program has established science steering/advisory committees via thematic working groups consisting of regional experts, a goal and deliverable of the AT Community during the FY05 project year. The Working Groups, consisting of experts on specific topic, are charged with identifying key monitoring questions, compiling summaries of existing monitoring efforts, and making initial recommendations for ongoing work. One or more members of each Working Group will, as invited participants, carry the Group's work to the symposium where it will be synthesized into the initiative's Technical Framework. Each Working Group will also hopefully become the nucleus of ongoing work on these topics.

- FY07 is very well staged to become a strong multi-nodal initiative. Marcia McNiff of the Northeast Information Node is already engaged with this initiative, and Gabrielle Canonico of the Mid-Atlantic Information Node will become involved so as to complete the full geographic coverage of the trail along with the Southern Appalachian Information Node.

- Discussions have been initiated with the Bird Conservation Node and the thematic Bird Working Group of the AT Environmental Monitoring Symposium for collaboration. It has also been recommended that the Fisheries and Aquatic Resources Node and the Invasive Species Node be integrated into the respective Symposium working group.

- Thomas Burley with the University of Tennessee/Southern Appalachian Information Node and Marcia McNiff with NBII/Northeast Information Node will be conducting training for use of the Portal at the Symposium in November.

- Discussions are underway to institutionalize the utilization of the AT Community by the ATC to communicate, educate, promote, facilitate and document their part of the AT Environmental Monitoring Program.

- Utilization of the AT Community for management and communication with the AT Environmental Monitoring Symposium has also led to the addition of another project, an Appalachian Trail-wide vegetation classification project headed by the National Park Service and NatureServe. This is a long term 3 to 5 year project just initiated this summer.

- Thomas Burley, the AT Community assistant manager, in coordination with Viv Hutchison, the NBII Metadata Coordinator, is going to begin conducting metadata training for NBII in 2007. Mr. Burley's involvement with the Community and it's broad range of members and topical areas will be a perfect opportunity for garnering interest for metadata training classes.

Support for the Forest Health Monitoring project and the Invasive Species Monitoring project – FY05 update:
The Forest Health Monitoring (FHM) project is currently still posted on the AT Community. The FHM project was to serve as a model to demonstrate the value of using the AT Community as a management tool for various dimensions of project management, but due to issues out of the control of the AT project managers, the FHM project did not evolve as planned. The Invasive Species Monitoring project was also a project that did not evolve as originally anticipated. Data collected for the FHM project was not transferred to SAIN to be coded, digitized and archived for reasons beyond the control of the AT Community project investigators. An attempt to document all communications, decisions, field data collection methodology and QA/QC was not followed through due to resistance among partners with using the Portal. This was further complicated by various decisions made via a stream of emails on the fly rather than via a systematic

methodology in documenting decisions. For example, the National Park Service Research Permit process was not followed according to procedures and neither was requesting permission to post signs at the plot locations in the Great Smoky Mountain National Park.

- The initiative was very formidable with the greatest achievement being to receive training on protocols to install field plots.

- An initiative was taken to establish university faculty & student participation but the project got bogged down as is understandable.

- Biggest lesson learned to date has been the challenge to get participants comfortable with using the functionality of the AT Community. From the Community manager's perspective, once people actually give it a try they are typically receptive as demonstrated by the current success using the Community for the AT Environmental Monitoring Symposium.

- Similar to the Forest Health Monitoring project, the project leads for the Invasive Species Monitoring project were hesitant about using the Community due to being unfamiliar and outside the familiar realm of email.

- The significant shortcomings of the initiative certainly did demonstrate the value of orderly project management.

Support for the Roan Mountain project – FY05 update:
The Roan Mountain project is posted on the AT Community. The Roan Mountain project focuses on creating a project toolkit to support data and information management for environmental research and adaptive management on the Roan Mountain massif. The AT Community has been utilized more successfully with this project than with the Invasive Species or Forest Health Monitoring projects, and most notably with the AT megatransect environmental monitoring symposium. Short-comings related to project member familiarity with navigating the Portal have arisen. Two legacy databases have been chosen to demonstrate the value-added of using a toolset and the AT Community has provided a forum for discussion. The FY05 final report is available on the Node's website, and the draft toolkit is available on the AT Community Roan project as well.

- The status of the metadata documentation of the 'transect and plot' database will soon be posted on the AT Community Roan Mountain project page. There has been an unanticipated delay with coordination of the metadata finalization, but final edits are under review now and will be made in a timely fashion.

- The initiative to establish a permanent archive at East Tennessee State University has been successful and is currently under way.

- FY06 of the Roan project is well poised to begin marketing of the Data Management Toolkit amongst Roan partners. The Toolkit also has great applicability to the AT Environmental Monitoring initiative in terms of data management and data evaluation.

- Part of the FY06 Roan Mountain project proposal includes an initiative to establish a science steering committee for Roan, which also relates to an AT Community deliverable.

Establishment of an on-line data viewer for the Appalachian Trail region – FY05 update:
The USGS Eastern Region Geospatial Program Office had previously agreed to devise the subject interactive web mapping data viewer. This project is being provided via in-kind services by personnel building the Cooperative Urban Ecosystem Studies (CUES) project and is most appreciated. The Appalachian Regional database was anticipated to be on-line in April, but

programmatic issues with the CUES website have delayed its launch. Thomas Burley, the AT Community co-manager, was notified by email on 8-25-06 that the website is ready for launch and should be made available in a timely fashion.

AT Community Development Strategy
The AT Community development strategy was devised as part of the deliverables for the FY05 project period. Below presents an outline of the objectives and strategies for marketing the Community to key stakeholders.

Goal
Expand awareness and utilization of the Community by a variety of client groups.

Objectives
- Look beyond federal land managing agencies
  Status: See Organization member table at the end of this report.
- Identify strategy to engage Community members
  Status: Applied on-the-ground initiatives for science that will ultimately result in biological data in the context of applied science. The AT Enviromental Monitoring Progrgam and Symposium is the key to this.
- Identify ways to engage target institutions and client groups
  Status: The AT Environmental Monitoring Program and Symposium has brought a significant diversity of partners to the table, all of whom are engaged through the NBII Portal AT Community for communication.
- Define target themes that could expand the scope of use
  Status: The AT Environmental Monitoring Program and Symposium has taken the approach of devising thematic working groups, including Air Quality and Climate Change, Birds, Vegetation, Visitor Usage, Water Quality, Data Management, Citizen Science, and Policy and Public Education.
- Define and implement a development and marketing plan
  Status: Developed per this development strategy.

Strategies and Incentives
- Do a more consistent and detailed job of monitoring use of Community (evaluation of how to improve incentive)
  Status: It has been determined that a common issue with engaging people through the Community is their ability to understand and navigate the NBII Portal hierarchy and interface. The AT Community navigation guide, developed by Thomas Burley, has been sent to all new members and is available on the Community. The ATC Symposium Coordinators, in addition to Thomas Burley, are also available for assistance with user needs. There are also plans to have overview training for use of the NBII Portal AT Community at the Symposium in November.
- Propose to NBII making partial access to the Community to the public via a URL (expand number of users incentive)
  Status: FY06 funds have been budgeted for development of a public "face" to the Community.
- Devise an "about us" Community page (personalization incentive)
  Status: Complete
- Improve and encourage use of Community "Feedback" tool (engagement incentive)
- Engage Community members via individual emails (personalized incentives)
  1. Ask selected members specific questions about ongoing Community related projects
  2. Ask selected members to update their park/forest statement on I&M activity and suggest which elements they would like to see expanded throughout the AT corridor
  3. Ask selected members to suggest potential monitoring themes based in part on innovative activities they are engaged in

- Engage the USGS CUES online dataviewer project
  Status: ***USGS Eastern Region Geospatial Program Office had initially agreed to serve the Appalachian Trail data compiled for characterization of the trail in a wide range of contexts.***

- Engage selected university faculty and agency personnel in new initiatives (publication incentive)
  1. Potential idea: Initiate a special addition of the e-Journal *Sustainability: Science, Practice & Policy* concerning potential monitoring/research/managementpolicy related to the Appalachian Highlands. This could be a foundation for additional university engagement in I&M activity on the Community. See list of potential themes and lead authors below which should follow the spirit of the journal:
     a. Alpine meadow/grassy balds - Peter Weigl and Peter White
     b. Springs - Chuck Parker
     c. Black bears - Joe Clark and Mike Vaughn
     d. Forest health - Ken Stolte
     e. Birds - Ted Simon
     f. Adjacent land use - John Peine and Deborah McGrath
     g. Air quality - Jim Renfro
     h. Viewsheds - Gary Johnson
     i. Northern Flying squirrel - Peter Weigl
     j. Landscape ecology - Chris McGrath
  2. SA-CESU Wildlands/Urban Interface (Fulfills SA-CESU membership request incentive)
     a. John Peine - lead
  3. NBII SAIN & MAIN combined efforts to establish a database on Appalachia - the potential role of the Community (targeting SAIN focus incentive)
     a. Jean Freeney – lead
  Status: ***University faculty have been contacted and invited to participate in the Environmental Monitoring Symposium, as well s in the various thematic working groups. All are engaged on the AT Community via coordination and planning for the Symposium.***

- Engage selected NGOs
  1. ATC & ATPO partners in implementation and fund raising for FHM project
  2. AMC & USGS partnering on phonology plots & climate monitors
  3. Selected NGO on an education program – Project Wild(?)
  4. SA Highlands Conservancy – Link to other conservancies
  *Status: **Several NGO's are engaged via the AT Environmental Monitoring Symposium.***

Status of AT Community membership
There is a growing interest in joining the AT Community. There are currently approx. 262 members. See table showing numbers by affiliation below. It is anticipated that the membership will continue to grow as planning for the AT Environmental Monitoring Symposium continues and thematic group activity increases.

Membership Count
Below is a table representing approximately 95% of the current membership of the AT Community by organization count.

ORGANIZATION	Approx. Member Count
A.T. Club Representatives	2
ABC News	1
Appalachian Mountain Club	5
Appalachian State University	1

Appalachian Trail Conservancy	17
Appalachian Voices	1
Audubon Society	1
BLRI Vistas	1
Blue Ridge Pkwy.	1
CMI	1
Connecticut Natural Diversity Database	1
Cornell Lab of Ornithology	2
East TN State Univ.	2
Ecological Society of America	1
Environment Canada	1
EPA	1
Foundations Of Success	1
Francis Marion College	1
George Wright Society	1
Georgia Natural Heritage Program	1
Grandfather Mtn. Biosphere Reserve	1
Great Smokey Mountains National Park	2
Harvard Kennedy School of Gov't	1
Henry P. Kendall Foundation	1
IUCN-World Protected Areas	5
Land of Sky Regional Council	2
Land trust for Little TN	1
Long Branch Enviro. Ed. Center	1
Maine Natural Areas Program	1
Mars Hill College	1
Maryland Natural Heritage Program	1
Massachusetts Natural Heritage & Endangered Species Program	1
Mt. Washington Observatory	1
NASA	1
National Center for Ecological Analysis and Synthesis (NCEAS)	1
National Geographic Society	1
National Park Service	29
NatureServe	8
NC Bartram Trail	1
NC Heritage Program	1
NEETF	1
NEON	2
NERO	3
New Hampshire Natural Heritage Bureau	1
New Jersey Natural Heritage Program	1
New York Natural Heritage Program	1
NGS	1
North Carolina Natural Heritage Program	1
North Carolina State University	1
NY Natural Heritage Program	1
Oak Ridge National Lab	1
Office of Surface Mining	1
Partners in Flight	1

Penn State Univ.	1
Pennsylvania Natural Heritage Program	2
Pennsylvania State Government	1
Plymouth State University	1
SAMAB	2
Southern App. Highlands Conservancy	5
State University of New York	2
Sterling Forest	1
The Nature Conservancy	2
The Nature Conservancy	1
TN Heritage	1
TN Eastman	2
TN Heritage	7
TN Izaak Walton League	1
TVA	1
U.S. Fish and Wildlife Service	5
U.S. Forest Service	34
U.S. Geological Survey	21
University - Cornell	1
University - Harvard Forest	1
University of Maine	1
University of Rhode Island	1
University of Tennessee	5
University of Tennessee-Chattanooga	1
VARO	2
Vermont Non-game & Natural Heritage Program	1
VINS	1
Virginia Division of Natural Heritage	4
Virginia Tech	2
Wake Forest University	1
West Virginia Wildlife Diversity Program	1
WWF	2